

**Forecast for GMAP Campaign in Mead, NE****Forecast Area: AltEn, 1332 County Rd 10, Mead, NE 68041****Forecast Valid For:** Thursday September 16, 2021**Forecast Prepared On:** Wednesday September 15, 2021**Prepared By:** Melissa Sheffer, Meteorologist, R5-ARD-APB-CSS**Summary:**

A cold front and surface low pressure system will be approaching the monitoring area from the north throughout the day on Thursday. As a result, wind speeds will increase on Thursday with wind gusts between 20 – 30 mph from the south and temperatures in the upper 80°F's with heat indices in the low 90's.

**Mixing Heights:** Mixing heights during the morning hours will be very low due to a weak 1.5°C temperature inversion extending up to 1,500 – 2,000 feet from the surface. This will limit atmospheric mixing and create poor dispersion conditions. The temperature inversion will start to lift around 8:00 AM which will increase mixing heights. The inversion will break fully by noon and mixing heights will steadily increase throughout the afternoon to a maximum height of 4,500 – 5,500 feet. After 5:00 PM mixing heights will decrease rapidly to around 500 – 700 feet by 8:00 PM.

**Winds:** Winds will be generally from the south on Thursday, with winds from the south-southwest in the morning and then gradually turning to come from the south-southeast in the afternoon. Wind speeds will be between 10 – 20 mph, and wind gusts will be between 20 – 30 mph throughout the day.

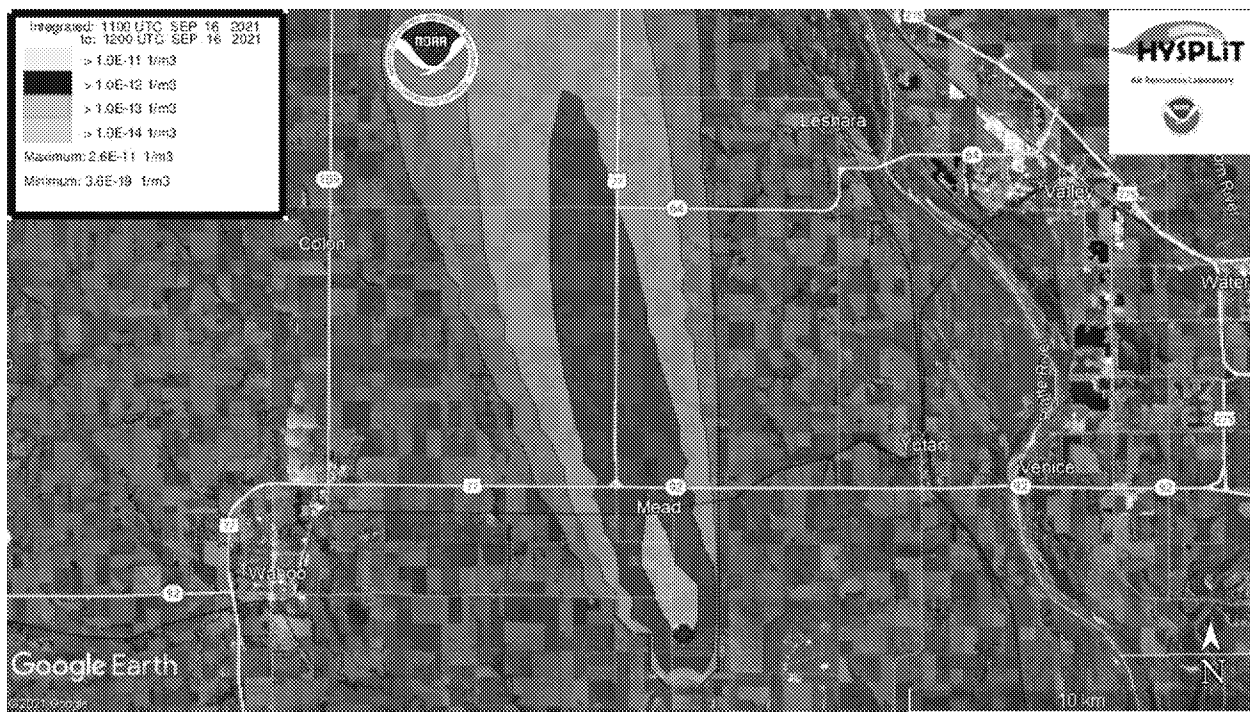
**Precipitation:** No precipitation is predicted for Thursday and skies will be clear to partly cloudy.

**Temperatures:** Maximum temperatures will be between 87 – 90°F on Thursday with dewpoints near 68°F. Heat indices will be between 90 – 92°F during the afternoon.

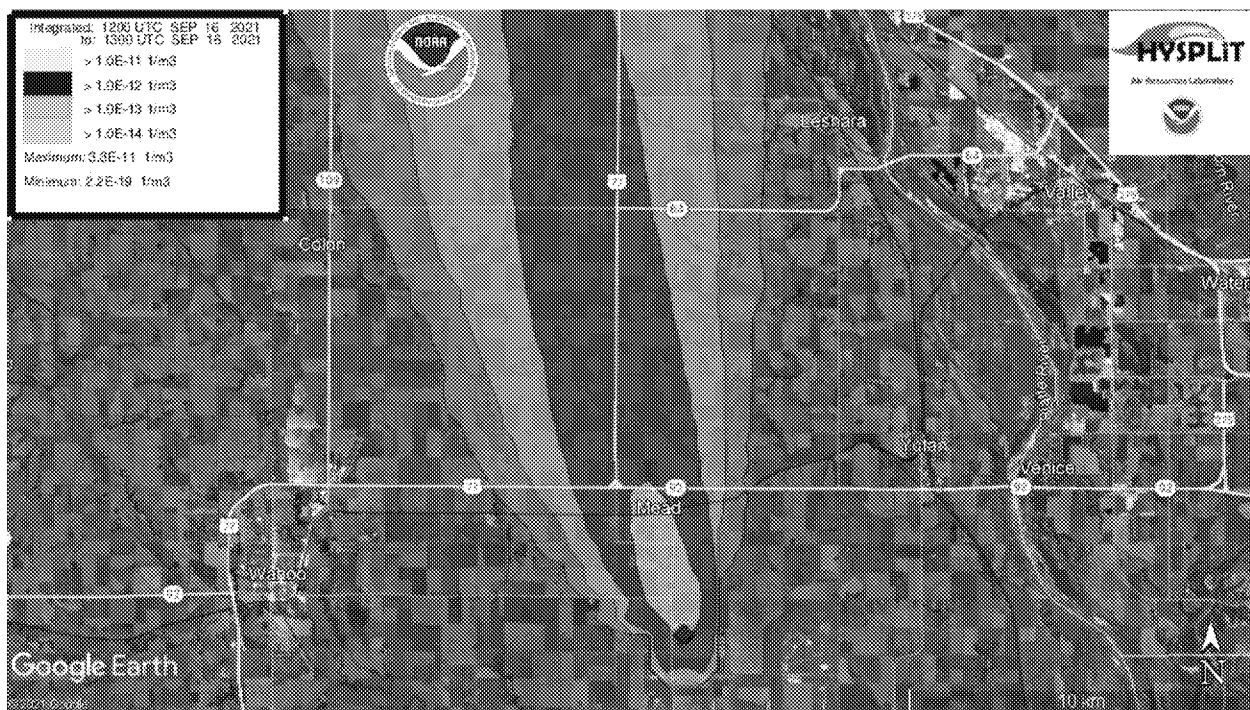
**HYSPLIT Model Results:** The HYSPLIT Dispersion Model predicts that modeled emission plumes from the facilities will disperse to the north-northwest in the morning and the north-northeast in the afternoon.

**Note:** The images generated by the HYSPLIT Dispersion Model are not intended to predict concentrations. The images are intended to show where plumes are predicted to disperse. These are predictions and may not reflect observed conditions.

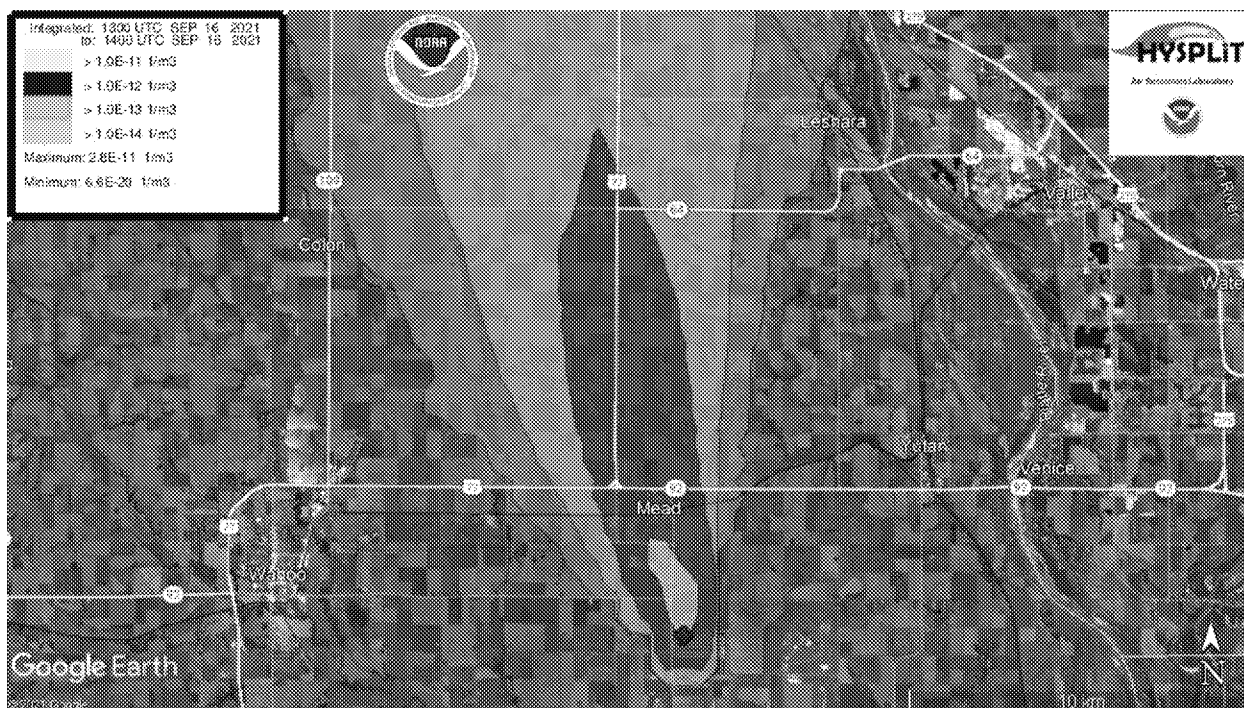
**AltEn, Mead, NE from 6:00 AM – 7:00 PM CDT (11:00 – 00:00 UTC):**



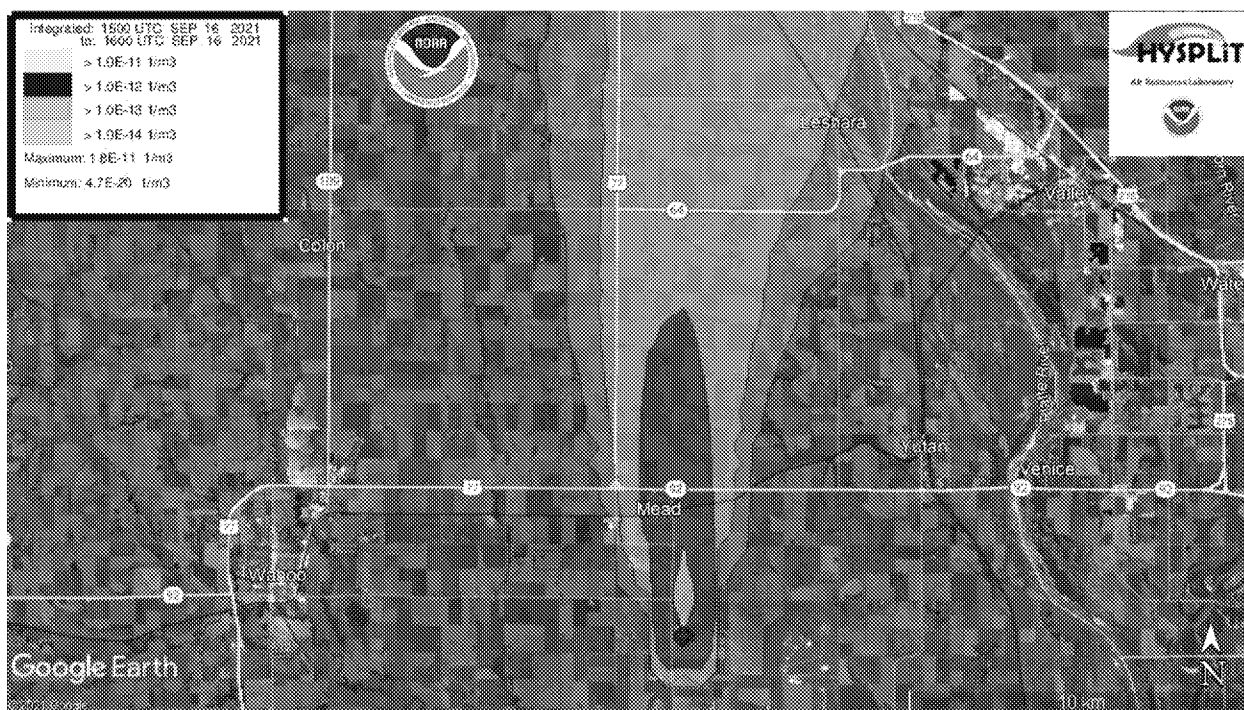
**Figure 1:** HYSPLIT Plume Dispersion for Thursday September 16, 2021 from 6:00 – 7:00 AM Central (11:00 – 12:00 UTC)



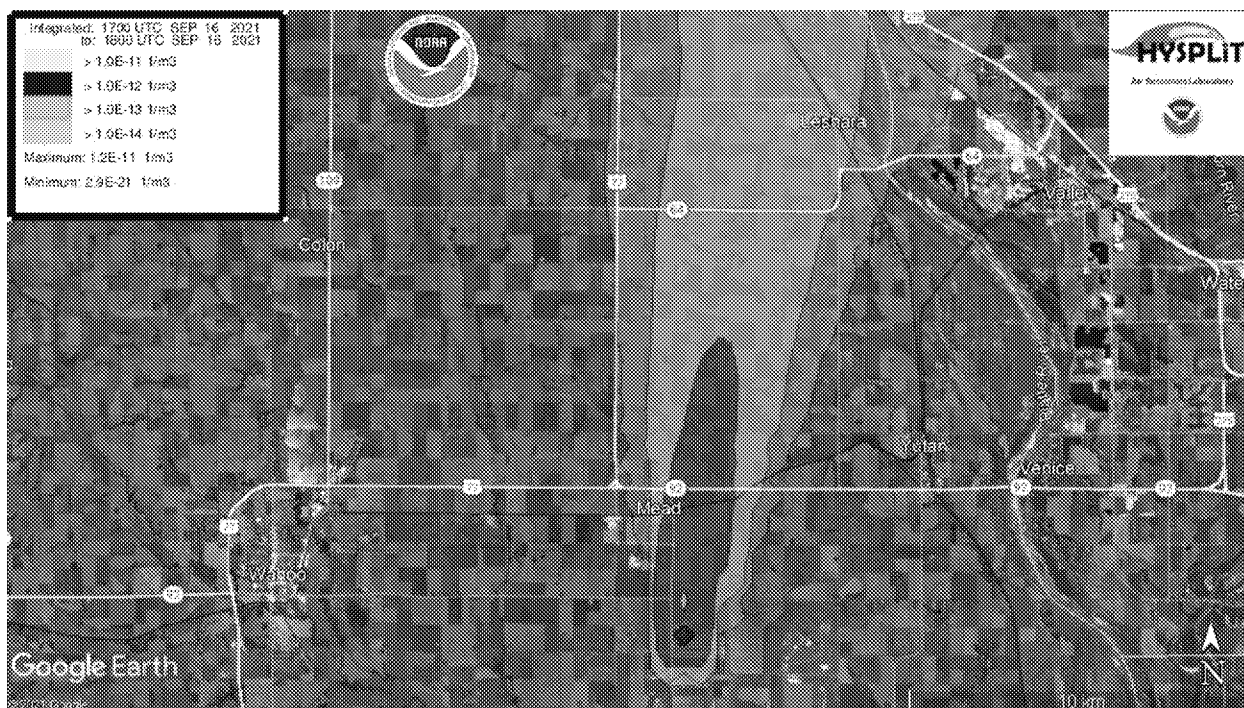
**Figure 2:** HYSPLIT Plume Dispersion for Thursday September 16, 2021 from 7:00 – 8:00 AM Central (12:00 – 13:00 UTC)



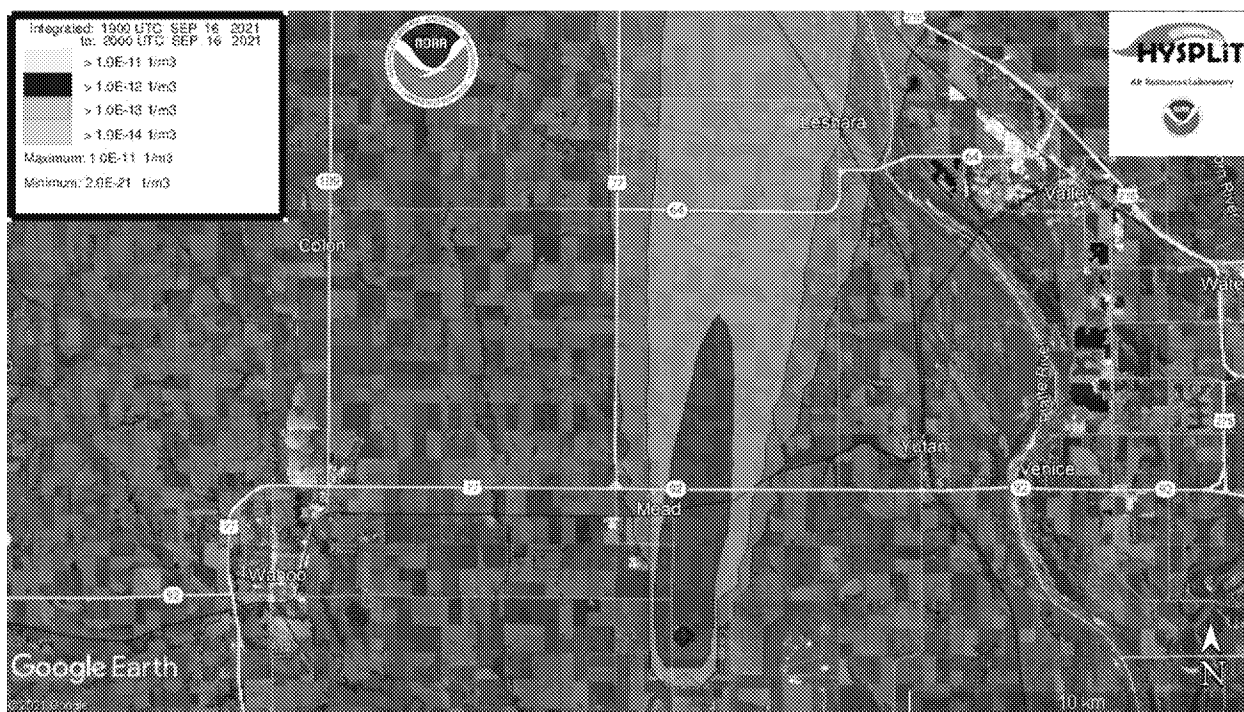
**Figure 3:** HYSPLIT Plume Dispersion for Thursday September 16, 2021 from 8:00 – 9:00 AM Central (13:00 – 14:00 UTC)



**Figure 4:** HYSPLIT Plume Dispersion for Thursday September 16, 2021 from 10:00 – 11:00 AM Central (15:00 – 16:00 UTC)

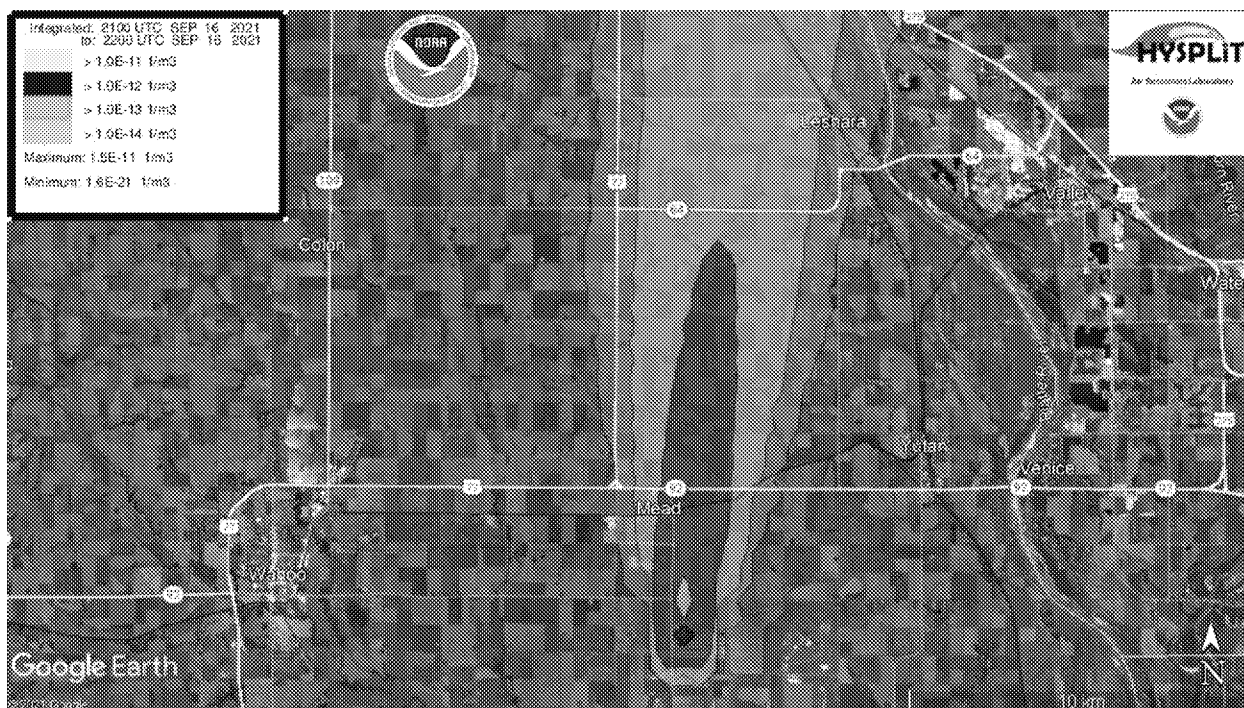


**Figure 5:** HYSPLIT Plume Dispersion for Thursday September 16, 2021 from 12:00 – 1:00 PM Central (17:00 – 18:00 UTC)

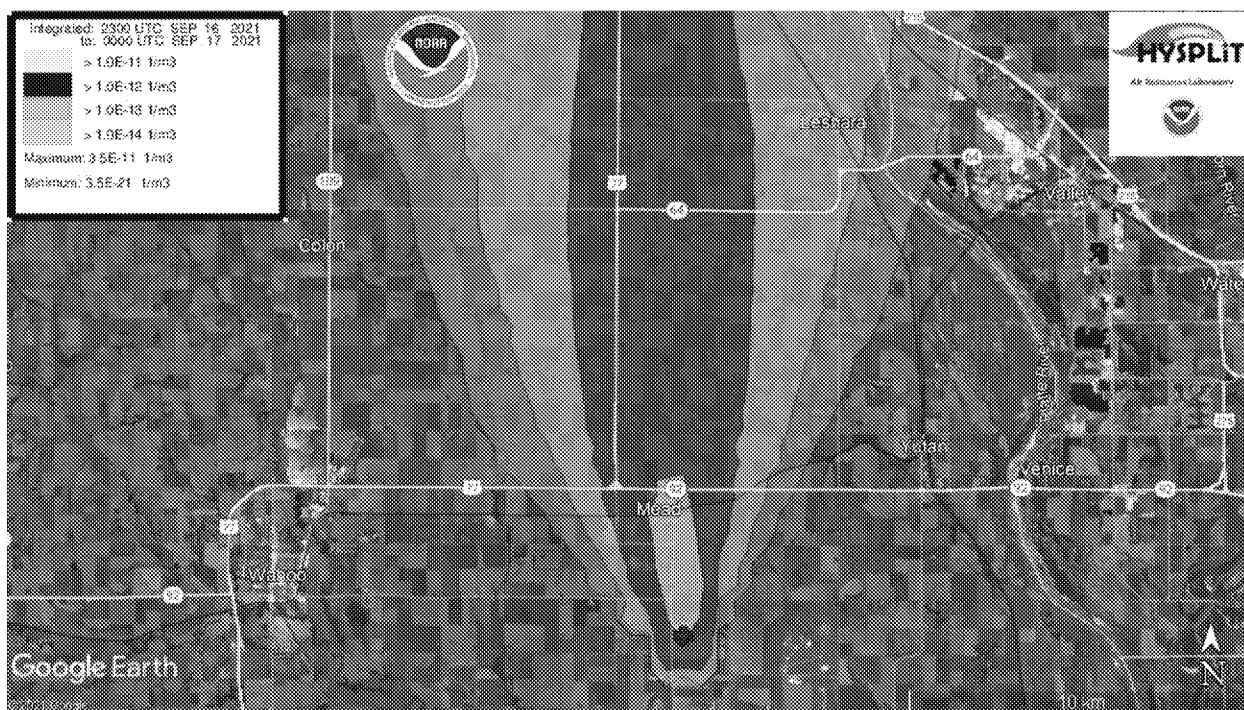


**Figure 6:** HYSPLIT Plume Dispersion for Thursday September 16, 2021 from 2:00 – 3:00 PM Central (19:00 – 20:00 UTC)





**Figure 7:** HYSPLIT Plume Dispersion for Thursday September 16, 2021 from 4:00 – 5:00 PM Central (21:00 – 22:00 UTC)



**Figure 8:** HYSPLIT Plume Dispersion for Thursday September 16, 2021 from 6:00 – 7:00 PM Central (23:00 – 00:00 UTC)